

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:31:43 ON 24 JAN 2005

=> fil .bec

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.48

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 13:32:25 ON 24 JAN 2005
ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s d(w) (amino acid or aspartate) (w)oxidase# or dao or ddo or daao

FILE 'MEDLINE'

556191 D

576838 AMINO

1304993 ACID

431184 AMINO ACID

(AMINO(W)ACID)

56459 ASPARTATE

67504 OXIDASE#

1164 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#

494 DAO

26 DDO

56 DAAO

L1 1599 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'SCISEARCH'

655916 D

358597 AMINO

1028855 ACID

190870 AMINO ACID

(AMINO(W)ACID)

38200 ASPARTATE

65161 OXIDASE#

709 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#

612 DAO

269 DDO

67 DAAO

L2 1538 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'LIFESCI'

162514 D

158721 "AMINO"

280949 "ACID"

109940 AMINO ACID

("AMINO" (W) "ACID")

14600 ASPARTATE

17012 OXIDASE#

254 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#

132 DAO

6 DDO

34 DAAO

L3 358 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOTECHDS'

41002 D

58349 AMINO

121082 ACID

41422 AMINO ACID

(AMINO(W)ACID)

1094 ASPARTATE
 6343 OXIDASE#
 229 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#
 37 DAO
 6 DDO
 58 DAAO
 L4 238 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOSIS'

650804 D
 497713 AMINO
 1181651 ACID
 288623 AMINO ACID
 (AMINO(W)ACID)
 66474 ASPARTATE
 84632 OXIDASE#
 1159 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#
 583 DAO
 37 DDO
 69 DAAO
 L5 1688 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'EMBASE'

477171 D
 392996 "AMINO"
 1276662 "ACID"
 266609 AMINO ACID
 ("AMINO" (W) "ACID")
 44764 ASPARTATE
 59725 OXIDASE#
 639 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#
 434 DAO
 15 DDO
 62 DAAO
 L6 1023 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'HCAPLUS'

2167125 D
 1008925 AMINO
 3927157 ACID
 497456 AMINO ACID
 (AMINO(W)ACID)
 55389 ASPARTATE
 113062 OXIDASE#
 2426 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#
 809 DAO
 276 DDO
 95 DAAO
 L7 3380 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'NTIS'

84501 D
 6881 AMINO
 43448 ACID
 2422 AMINO ACID
 (AMINO(W)ACID)
 266 ASPARTATE
 732 OXIDASE#
 3 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE#
 69 DAO
 10 DDO
 2 DAAO
 L8 84 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

FILE 'ESBIOBASE'

- 180147 D
- 161799 AMINO
- 302185 ACID
- 90702 AMINO ACID
 - (AMINO(W)ACID)
- 18493 ASPARTATE
- 19285 OXIDASE#
 - 257 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE#
 - 149 DAO
 - 6 DDO
 - 50 DAAO

L9 378 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'BIOTECHNO'

- 124470 D
- 204625 AMINO
- 349810 ACID
- 154660 AMINO ACID
 - (AMINO(W)ACID)
- 8066 ASPARTATE
- 16788 OXIDASE#
 - 283 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE#
 - 103 DAO
 - 5 DDO
 - 40 DAAO

L10 345 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE# OR DAO OR DDO OR DAAO

FILE 'WPIDS'

- 543891 D
- 226203 AMINO
- 879395 ACID
- 61223 AMINO ACID
 - (AMINO(W)ACID)
- 2288 ASPARTATE
- 6533 OXIDASE#
 - 103 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE#
 - 76 DAO
 - 19 DDO
 - 7 DAAO

L11 176 D(W) (AMINO ACID OR ASPARTATE) (W)OXIDASE# OR DAO OR DDO OR DAAO

TOTAL FOR ALL FILES

L12 10807 D(W) (AMINO ACID OR ASPARTATE) (W) OXIDASE# OR DAO OR DDO OR DAAO

=> s l12 and (schizophrenia or depression or bipolar)

FILE 'MEDLINE'

- 65416 SCHIZOPHRENIA
- 156809 DEPRESSION
- 30838 BIPOLAR

L13 14 L1 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'SCISEARCH'

- 43623 SCHIZOPHRENIA
- 97210 DEPRESSION
- 33394 BIPOLAR

L14 26 L2 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'LIFESCI'

- 2427 SCHIZOPHRENIA
- 12585 DEPRESSION
- 3197 BIPOLAR

L15 1 L3 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'BIOTECHDS'
 912 SCHIZOPHRENIA
 899 DEPRESSION
 319 BIPOLAR
 L16 5 L4 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'BIOSIS'
 39163 SCHIZOPHRENIA
 111654 DEPRESSION
 19476 BIPOLAR
 L17 15 L5 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'EMBASE'
 53845 SCHIZOPHRENIA
 162527 DEPRESSION
 20788 BIPOLAR
 L18 13 L6 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'HCAPLUS'
 12624 SCHIZOPHRENIA
 71500 DEPRESSION
 31529 BIPOLAR
 L19 34 L7 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'NTIS'
 180 SCHIZOPHRENIA
 2979 DEPRESSION
 2318 BIPOLAR
 L20 1 L8 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'ESBIOBASE'
 9171 SCHIZOPHRENIA
 22032 DEPRESSION
 5215 BIPOLAR
 L21 5 L9 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'BIOTECHNO'
 2079 SCHIZOPHRENIA
 5916 DEPRESSION
 1671 BIPOLAR
 L22 6 L10 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

FILE 'WPIDS'
 5789 SCHIZOPHRENIA
 30108 DEPRESSION
 31874 BIPOLAR
 L23 4 L11 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

TOTAL FOR ALL FILES
 L24 124 L12 AND (SCHIZOPHRENIA OR DEPRESSION OR BIPOLAR)

=> s l24 not 2002-2005/py
 FILE 'MEDLINE'
 1700337 2002-2005/PY
 L25 5 L13 NOT 2002-2005/PY

FILE 'SCISEARCH'
 3104532 2002-2005/PY
 L26 7 L14 NOT 2002-2005/PY

FILE 'LIFESCI'
 283629 2002-2005/PY
 L27 0 L15 NOT 2002-2005/PY

FILE 'BIOTECHDS'
70178 2002-2005/PY
L28 0 L16 NOT 2002-2005/PY

FILE 'BIOSIS'
1474986 2002-2005/PY
L29 3 L17 NOT 2002-2005/PY

FILE 'EMBASE'
1456974 2002-2005/PY
L30 3 L18 NOT 2002-2005/PY

FILE 'HCAPLUS'
3250983 2002-2005/PY
L31 13 L19 NOT 2002-2005/PY

FILE 'NTIS'
36990 2002-2005/PY
L32 1 L20 NOT 2002-2005/PY

FILE 'ESBIOBASE'
883036 2002-2005/PY
L33 0 L21 NOT 2002-2005/PY

FILE 'BIOTECHNO'
244553 2002-2005/PY
L34 1 L22 NOT 2002-2005/PY

FILE 'WPIDS'
3079103 2002-2005/PY
L35 0 L23 NOT 2002-2005/PY

TOTAL FOR ALL FILES
L36 33 L24 NOT 2002-2005/PY

=> dup rem l36
PROCESSING COMPLETED FOR L36
L37 26 DUP REM L36 (7 DUPLICATES REMOVED)

=> d tot

L37 ANSWER 1 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
STN

TI Matrix-assisted laser desorption/ionization time-of-flight mass
spectrometry of cod liver oil and the effect of analyte/matrix
concentration on signal intensities

SO RAPID COMMUNICATIONS IN MASS SPECTROMETRY, (15 OCT 1999) Vol. 13, No. 17,
pp. 1762-1769.
Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19
1UD, ENGLAND.
ISSN: 0951-4198.

AU Ayorinde F O (Reprint); Keith Q L; Wan L W
AN 1999:702103 SCISEARCH

L37 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN

TI Alterations of gastrointestinal motility and mucosal barrier in shock rat
model induced by endotoxin plus tumor necrosis factor- α

SO Shijie Huaren Xiaohua Zazhi (1999), 7(6), 510-512
CODEN: SHXZF2

AU Ci, Xiu-Li; Wang, Bao-En; Zhang, Shu-Wen; Zhang, Ning-Ning
AN 1999:429692 HCAPLUS
DN 131:227048

L37 ANSWER 3 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on

STN
 TI CHINESE MEDICINE AND THE BETRAYAL OF INTIMACY - THE THEORY AND TREATMENT
 OF ABUSE, INCEST, RAPE AND DIVORCE WITH ACUPUNCTURE AND HERBS .3.
 CASE-STUDY
 SO AMERICAN JOURNAL OF ACUPUNCTURE, (1995) Vol. 23, No. 3, pp. 241-268.
 ISSN: 0091-3960.
 AU JARRETT L S (Reprint)
 AN 95:697257 SCISEARCH

L37 ANSWER 4 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI VARIOUS CLINICAL ASPECTS OF DIDMOAD (WOLFRAM) SYNDROME
 SO TURKISH JOURNAL OF PEDIATRICS, (JUL/SEP 1995) Vol. 37, No. 3, pp. 235-240.
 ISSN: 0041-4301.
 AU OKTEN A (Reprint); GEDIK Y; DEMIRCI A; MOCAN H; ERDURAN E; ASLAN Y
 AN 96:226589 SCISEARCH

L37 ANSWER 5 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI CHINESE MEDICINE AND THE BETRAYAL OF INTIMACY - THE THEORY AND TREATMENT
 OF ABUSE, INCEST, RAPE AND DIVORCE WITH ACUPUNCTURE AND HERBS .2.
 SO AMERICAN JOURNAL OF ACUPUNCTURE, (1995) Vol. 23, No. 2, pp. 123-151.
 ISSN: 0091-3960.
 AU JARRETT L S (Reprint)
 AN 95:428458 SCISEARCH

L37 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Effect of nafenopin on the liver peroxisomal enzymes activities in the rat
 SO Alexandria Journal of Pharmaceutical Sciences (1995), 9(2), 83-7
 CODEN: AJPSES; ISSN: 1110-1792
 AU Abdellatif, Awad G.; Ben-Sreti, Mohammed M.; ElDebani, Abdel-Kadir H.
 AN 1995:844832 HCAPLUS
 DN 123:282283

L37 ANSWER 7 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI MIXED MONOLAYERS AND LANGMUIR-BLODGETT-FILMS CONSISTING OF A FATTY AMINE
 AND A BIPOLAR SUBSTANCE
 SO LANGMUIR, (APR 1994) Vol. 10, No. 4, pp. 1213-1224.
 ISSN: 0743-7463.
 AU BERG J M (Reprint); ERIKSSON L G T
 AN 94:255225 SCISEARCH

L37 ANSWER 8 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI HIGH-RESOLUTION OPTICAL IMAGING OF THE FROSTY LEO NEBULA
 SO PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF THE PACIFIC, (JUL 1994) Vol.
 106, No. 701, pp. 736-744.
 ISSN: 0004-6280.
 AU LANGILL P P (Reprint); KWOK S; HRIVNAK B J
 AN 94:499142 SCISEARCH

L37 ANSWER 9 OF 26 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI EFFECTS OF COMPTON-SCATTERING IN ATMOSPHERES OF HTO WHITE-DWARFS
 SO ASTRONOMY AND ASTROPHYSICS, (JUN 1994) Vol. 286, No. 2, pp. 515-522.
 ISSN: 0004-6361.
 AU MADEJ J (Reprint)
 AN 94:392325 SCISEARCH

L37 ANSWER 10 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
 STN
 TI EFFECTS OF EXCESS D AND L METHIONINE DIETS ON GROWTH AND HEPATIC ENZYME
 ACTIVITIES IN RATS.

SO Agricultural and Biological Chemistry, (1987) Vol. 51, No. 12, pp.
3411-3414.
CODEN: ABCHA6. ISSN: 0002-1369.

AU SUGIYAMA K [Reprint author]; MURAMATSU K
AN 1988:186972 BIOSIS

L37 ANSWER 11 OF 26 MEDLINE on STN DUPLICATE 3
TI Effects of D-amino acids on growth rate and kidney D-
amino acid oxidase in chicks.
SO Poultry science, (1987 Jan) 66 (1) 98-102.
Journal code: 0401150. ISSN: 0032-5791.
AU de Moraes G H; Rogler J C; Featherston W R
AN 87203827 MEDLINE

L37 ANSWER 12 OF 26 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 4
TI Regulation of L-amino acid oxidase and of **d-amino
acid oxidase** in *Neurospora crassa*.
SO Molecular and General Genetics, (1982) 186/1 (33-39).
CODEN: MGGEAE
AU Sikora L.; Marzluf G.A.
AN 82207594 EMBASE

L37 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Spectral energy distributions of barium stars
SO Astrophysical Journal (1979), 231(1, Pt. 1), 144-7
CODEN: ASJOAB; ISSN: 0004-637X
AU Lu, Phillip K.; Sawyer, David
AN 1979:466066 HCAPLUS
DN 91:66066

L37 ANSWER 14 OF 26 NTIS COPYRIGHT 2005 NTIS on STN
TI Effects of Inflammation on Peroxisomal Enzyme Activity, Catalase
Synthesis and Lipid Metabolism. Interim rept.
NR AD-A036 061/0/XAB .
34p; 16 Feb 1977
PD 16 Feb 1977
AU Canonico, P. G.; Rill, W.; Ayala, E.
AN 1977(37):09972 NTIS

L37 ANSWER 15 OF 26 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
STN DUPLICATE 5
TI EFFECTS OF INFLAMMATION ON PEROXISOMAL ENZYME ACTIVITIES CATALASE
SYNTHESIS AND LIPID METABOLISM.
SO Laboratory Investigation, (1977) Vol. 37, No. 5, pp. 479-486.
CODEN: LAINAW. ISSN: 0023-6837.
AU CANONICO P G [Reprint author]; RILL W; AYALA E
AN 1978:154040 BIOSIS

L37 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI The giant branch of Omega Centauri. I. Abundance variations due to
mixing
SO Astrophysical Journal (1976), 208(2, Pt. 1), 369-81
CODEN: ASJOAB; ISSN: 0004-637X
AU Bessell, M. S.; Norris, John
AN 1976:533932 HCAPLUS
DN 85:133932

L37 ANSWER 17 OF 26 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN DUPLICATE 6
TI Variation in peroxisomal enzyme levels of peripheral leukocytes of cancer,
leprosy, and tuberculosis patients.
SO Cancer Research, (1974) 34/10 (2784-2789).
CODEN: CNREA8

AU Hokama Y.; Kimura L.H.; Kobara T.Y.; et al.
AN 75128978 EMBASE

L37 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of sulfur compounds on various sulfhydryl-dependent enzyme systems
SO Archives Internationales de Pharmacodynamie et de Therapie (1973), 201(1), 77-89
CODEN: AIPTAK; ISSN: 0003-9780
AU Bakshy, S.; Gershbein, L. L.
AN 1973:132040 HCAPLUS
DN 78:132040

L37 ANSWER 19 OF 26 MEDLINE on STN
TI The occurrence of superoxide anion in the reaction of reduced phenazine methosulfate and molecular oxygen.
SO Biochemical and biophysical research communications, (1972 Jan 31) 46 (2) 849-54.
Journal code: 0372516. ISSN: 0006-291X.
AU Nishikimi M; Appaji N; Yagi K
AN 72101396 MEDLINE

L37 ANSWER 20 OF 26 MEDLINE on STN
TI Metabolism of leucine in protein-calorie-deficient rats.
SO Biochemical journal, (1969 Feb) 111 (4) 565-71.
Journal code: 2984726R. ISSN: 0264-6021.
AU McFarlane I G; Von Holt C
AN 69136457 MEDLINE

L37 ANSWER 21 OF 26 MEDLINE on STN
TI Mutual antagonism in the metabolism of D-valine and D-leucine and antagonism by their analogs.
SO Archives of biochemistry and biophysics, (1969 Dec) 135 (1) 341-9.
Journal code: 0372430. ISSN: 0003-9861.
AU Cruz L J; Glesne L B; Berg C P
AN 70077015 MEDLINE

L37 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Neuropharmacological actions of Acorus oil
SO Archives Internationales de Pharmacodynamie et de Therapie (1968), 172(2), 356-65
CODEN: AIPTAK; ISSN: 0003-9780
AU Dhalla, N. S.; Bhattacharya, I. C.
AN 1968:417829 HCAPLUS
DN 69:17829

L37 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Effect of chlorotetracycline to cause deficiency of flavines
SO Journal of Vitaminology (1968), 14(4), 271-7
CODEN: JVITA5; ISSN: 0022-5398
AU Yagi, Kunio; Yamamoto, Yoshiko; Kobayashi, Misao
AN 1969:56154 HCAPLUS
DN 70:56154

L37 ANSWER 24 OF 26 MEDLINE on STN
TI The effects of the administration of sodium benzoate and diethylstilbestrol disulfate on the hepatic levels of several glucocorticoid-sensitive enzymes in adrenalectomized rats.
SO Biochimica et biophysica acta, (1967) 146 (2) 443-51.
Journal code: 0217513. ISSN: 0006-3002.
AU Singer S; Mason M
AN 68090039 MEDLINE

L37 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Role of vitamin B6 in metabolism of L- and D-amino acids in animal

organism. Effect of B6-avitaminosis on transformations of L- and D-phenylalanine in living rats
SO Doklady Akademii Nauk SSSR (1952), 86, 605-8
CODEN: DANKAS; ISSN: 0002-3264
AU Berezov, T. T.
AN 1953:29210 HCAPLUS
DN 47:29210
OREF 47:4973d-f

L37 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Depression of the d-amino acid
oxidase activity in the organs of tumor-bearing rats
SO Z. physiol. Chem. (1942), 276, 191-204
AU Westphal, U.
AN 1943:34055 HCAPLUS
DN 37:34055
OREF 37:5477e-f

=> s 112 and d(w)serine

FILE 'MEDLINE'

556191 D

80475 SERINE

701 D(W) SERINE

L38 36 L1 AND D(W) SERINE

FILE 'SCISEARCH'

655916 D

47160 SERINE

900 D(W) SERINE

L39 68 L2 AND D(W) SERINE

FILE 'LIFESCI'

162514 D

19965 SERINE

275 D(W) SERINE

L40 12 L3 AND D(W) SERINE

FILE 'BIOTECHDS'

41002 D

4138 SERINE

85 D(W) SERINE

L41 10 L4 AND D(W) SERINE

FILE 'BIOSIS'

650804 D

62994 SERINE

1211 D(W) SERINE

L42 53 L5 AND D(W) SERINE

FILE 'EMBASE'

477171 D

51752 SERINE

658 D(W) SERINE

L43 35 L6 AND D(W) SERINE

FILE 'HCAPLUS'

2167125 D

98821 SERINE

2317 D(W) SERINE

L44 88 L7 AND D(W) SERINE

FILE 'NTIS'

84501 D

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      498 SERINE
      4 D(W) SERINE
L45      0 L8 AND D(W) SERINE

FILE 'ESBIOBASE'
      180147 D
      24079 SERINE
      296 D(W) SERINE
L46      33 L9 AND D(W) SERINE

FILE 'BIOTECHNO'
      124470 D
      28989 SERINE
      165 D(W) SERINE
L47      13 L10 AND D(W) SERINE

FILE 'WPIDS'
      543891 D
      7283 SERINE
      174 D(W) SERINE
L48      7 L11 AND D(W) SERINE

TOTAL FOR ALL FILES
L49      355 L12 AND D(W) SERINE

=> s l49 not 2002-2005/py
FILE 'MEDLINE'
      1700337 2002-2005/PY
L50      23 L38 NOT 2002-2005/PY

FILE 'SCISEARCH'
      3104532 2002-2005/PY
L51      45 L39 NOT 2002-2005/PY

FILE 'LIFESCI'
      283629 2002-2005/PY
L52      9 L40 NOT 2002-2005/PY

FILE 'BIOTECHDS'
      70178 2002-2005/PY
L53      3 L41 NOT 2002-2005/PY

FILE 'BIOSIS'
      1474986 2002-2005/PY
L54      34 L42 NOT 2002-2005/PY

FILE 'EMBASE'
      1456974 2002-2005/PY
L55      24 L43 NOT 2002-2005/PY

FILE 'HCAPLUS'
      3250983 2002-2005/PY
L56      62 L44 NOT 2002-2005/PY

FILE 'NTIS'
      36990 2002-2005/PY
L57      0 L45 NOT 2002-2005/PY

FILE 'ESBIOBASE'
      883036 2002-2005/PY
L58      18 L46 NOT 2002-2005/PY

FILE 'BIOTECHNO'
      244553 2002-2005/PY

```

L59 9 L47 NOT 2002-2005/PY

FILE 'WPIDS'

3079103 2002-2005/PY

L60 1 L48 NOT 2002-2005/PY

TOTAL FOR ALL FILES

L61 228 L49 NOT 2002-2005/PY

=> dup rem l61

PROCESSING COMPLETED FOR L61

L62 94 DUP REM L61 (134 DUPLICATES REMOVED)

=> d tot

L62 ANSWER 1 OF 94 MEDLINE on STN DUPLICATE 1
TI Chiral analysis of amino acids using electrochemical composite bienzyme biosensors.
SO Analytical biochemistry, (2001 Nov 15) 298 (2) 275-82.
Journal code: 0370535. ISSN: 0003-2697.
AU Dominguez R; Serra B; Reviejo A J; Pingarron J M
AN 2001648922 MEDLINE

L62 ANSWER 2 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Amino acids, then and now - A reflection on Sir Hans Krebs' contribution to nitrogen metabolism
SO IUBMB LIFE, (DEC 2001) Vol. 52, No. 6, pp. 265-270.
Publisher: TAYLOR & FRANCIS INC, 325 CHESTNUT ST, SUITE 800, PHILADELPHIA, PA 19106 USA.
ISSN: 1521-6543.
AU Brosnan J T (Reprint)
AN 2002:221457 SCISEARCH

L62 ANSWER 3 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
TI Determination of free D-proline and D-leucine in the brains of mutant mice lacking D-amino acid oxidase activity
SO ANALYTICAL BIOCHEMISTRY, (15 NOV 2001) Vol. 298, No. 2, pp. 253-258.
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA.
ISSN: 0003-2697.
AU Hamase K; Inoue T; Morikawa A; Konno R; Zaitzu K (Reprint)
AN 2001:954334 SCISEARCH

L62 ANSWER 4 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
TI Chiral analysis of amino acids using composite bienzyme biosensors
SO Proceedings - Electrochemical Society (2001), 2001-18 (Chemical and Biological Sensors and Analytical Methods II), 187-195
CODEN: PESODO; ISSN: 0161-6374
AU Dominguez, R.; Serra, B.; Reviejo, A. J.; Pingarron, J. M.
AN 2002:825848 HCAPLUS
DN 138:133352

L62 ANSWER 5 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 2
TI Preparation of D-amino acid oxidase -immobilized polyion complex membranes
SO SENSORS AND ACTUATORS B-CHEMICAL, (1 JUN 2001) Vol. 76, No. 1-3, pp. 142-146.
Publisher: ELSEVIER SCIENCE SA, PO BOX 564, 1001 LAUSANNE, SWITZERLAND.
ISSN: 0925-4005.
AU Yabuki S (Reprint); Mizutani F; Hirata Y

AN 2001:536760 SCISEARCH

L62 ANSWER 6 OF 94 MEDLINE on STN DUPLICATE 3

TI Determination of free D-aspartic acid, D-serine and D-alanine in the brain of mutant mice lacking D-amino acid oxidase activity.

SO Journal of chromatography. B, Biomedical sciences and applications, (2001 Jun 5) 757 (1) 119-25.
Journal code: 9714109. ISSN: 1387-2273.

AU Morikawa A; Hamase K; Inoue T; Konno R; Niwa A; Zaitzu K

AN 2002014615 MEDLINE

L62 ANSWER 7 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 4

TI Distribution of D-amino-acid oxidase and D-serine in vertebrate brains

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L62 ANSWER 9 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN

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L62 ANSWER 10 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

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CODEN: JACSAT; ISSN: 0002-7863

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 Ref: 110
 Journal code: 9705402. ISSN: 1420-682X.
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L62 ANSWER 13 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
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 Meeting Info.: Annual Meeting and Exhibition of the Society for Integrative and Comparative Biology. Chicago, Illinois, USA. January 03-07, 2001. Society for Integrative and Comparative Biology.
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 Publisher: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
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 SO Pure and Applied Chemistry (2000), 72(3), 373-384
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 DN 133:189612

L62 ANSWER 18 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
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L62 ANSWER 19 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
DUPLICATE 9

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SO NEUROSCIENCE, (SEP 2000) Vol. 100, No. 1, pp. 183-189.

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ISSN: 0306-4522.

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SO Chromatography (2000), 21(2), 157-158

CODEN: CHROFZ; ISSN: 1342-8284

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L62 ANSWER 21 OF 94 MEDLINE on STN DUPLICATE 10

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L62 ANSWER 23 OF 94 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

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useful for diagnosing kidney insufficiency, Alzheimer disease and cataract;

using Fusarium oxysporum

AN 2000-03482 BIOTECHDS

PI JP 11318439 24 Nov 1999

L62 ANSWER 24 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

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Journal code: 0370511. ISSN: 0002-9513.
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L62 ANSWER 26 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
on STN
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on STN
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CS S. Silbernagl, Physiologisches Institut, Universitat Wurzburg,
Rontgenring 9, D-97070 Wurzburg, Germany.
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CODEN: AJPPFK ISSN: 0363-6127
DT Journal; Article
CY United States
LA English
SL English

L62 ANSWER 28 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
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detection
SO Biosensors & Bioelectronics (1999), 14(3), 335-340
CODEN: BBIOE4; ISSN: 0956-5663
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L62 ANSWER 29 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
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SO Biomedical and Health Research (1999), 27(Enzymatic Mechanisms), 176-186
CODEN: BIHREN; ISSN: 0929-6743
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Mark; Cleland, W. W.
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L62 ANSWER 30 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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SO Biosensors & Bioelectronics (1998), 13(12), 1251-1255
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DN 130:167188

L62 ANSWER 34 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
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SO Process Biochemistry (Oxford) (1998), 33(4), 461-467
CODEN: PBCHE5; ISSN: 1359-5113
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AN 1998:356365 HCAPLUS
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L62 ANSWER 35 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
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ISSN: 0190-5295.
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ISSN: 0167-4781.

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amino acid oxidase.

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Journal code: 0370623. ISSN: 0006-2960.

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L62 ANSWER 39 OF 94 MEDLINE on STN DUPLICATE 15

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Journal code: 7505876. ISSN: 0027-8424.

AU Schell M J; Cooper O B; Snyder S H

AN 97203178 MEDLINE

L62 ANSWER 40 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

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peroxyoxalate chemiluminescence detection for the determination of total
D-amino acids in human plasma

SO Analytical Sciences (1997), 13(6), 945-950

CODEN: ANSCEN; ISSN: 0910-6340

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L62 ANSWER 41 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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aspartate oxidase

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L62 ANSWER 42 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
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its reactive oxygen metabolites lead to epithelial damage.

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Meeting Info.: Symposium on Renal Electrolyte Metabolism: Physiology and

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function.

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Journal code: 0045503. ISSN: 0006-8993.

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AN 1998065288 MEDLINE

L62 ANSWER 44 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
on STN DUPLICATE 17

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lacking **D-amino-acid oxidase**
activity

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Publisher: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.

ISSN: 0939-4451.

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AN 97:497155 SCISEARCH

L62 ANSWER 45 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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present in the mouse liver

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NETHERLANDS.

ISSN: 0304-4165.

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L62 ANSWER 46 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
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oxidase (DAO) activity in the rat brain and spinal cord.

SO Journal of the Autonomic Nervous System, (1997) Vol. 65, No. 2-3, pp. 101.
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CODEN: JASYDS. ISSN: 0165-1838.

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LIVER - AN IMMUNOCYTOCHEMICAL STUDY

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1013-1019.

ISSN: 0022-1554.

AU ZAAR K (Reprint)

AN 96:665567 SCISEARCH

L62 ANSWER 48 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

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Rhodospiridium toruloides
SO Letters in Applied Microbiology (1996), 23(5), 283-286
CODEN: LAMIE7; ISSN: 0266-8254
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AN 1996:719663 HCAPLUS
DN 126:3631

L62 ANSWER 49 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
on STN
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PIG-KIDNEY ENZYMES
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ISSN: 0939-4451.
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on STN DUPLICATE 18
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SO JOURNAL OF FERMENTATION AND BIOENGINEERING, (1996) Vol. 82, No. 2, pp.
177-179.
ISSN: 0922-338X.
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L62 ANSWER 51 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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TI DISTRIBUTION OF D-ASPARTATE OXIDASE AND FREE
D-GLUTAMATE AND D-ASPARTATE IN CHICKEN AND PIGEON TISSUES
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BIOLOGY, (SEP 1996) Vol. 115, No. 1, pp. 121-126.
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L62 ANSWER 52 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
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acid oxidase from Trigonopsis variabilis
SO Archives of Microbiology (1996), 165(1), 41-7
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AU Schraeder, Thomas; Andreesen, Jan R.
AN 1996:243833 HCAPLUS
DN 125:52105

L62 ANSWER 53 OF 94 MEDLINE on STN DUPLICATE 19
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Journal code: 7505876. ISSN: 0027-8424.
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L62 ANSWER 54 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
on STN
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D-ASPARTATE AND **D-SERINE** IN RAT-BRAIN AND PERIPHERY
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ISSN: 0953-816X.
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AN 95:567690 SCISEARCH

L62 ANSWER 55 OF 94 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
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 acid-oxidases;
 L-amino acid e.g. L-serine production from molasses or synthetic amino
 acid mixture using pig kidney or *Trichoderma variabilis* D-
 amino-acid-oxidase (conference paper)
 SO Ann.N.Y.Acad.Sci.; (1995) 750, 415-20
 CODEN: ANYAA9 ISSN: 0077-8923
 12th International Enzyme Engineering Conference, Deauville, France,
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 AU Fischer L; Hoerner R; Wagner F
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 (Reprint)
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L62 ANSWER 57 OF 94 MEDLINE on STN DUPLICATE 21
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 -amino-acid oxidase.
 SO Journal of biological chemistry, (1994 May 27) 269 (21) 15054-9.
 Journal code: 2985121R. ISSN: 0021-9258.
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L62 ANSWER 58 OF 94 MEDLINE on STN DUPLICATE 22
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 reductive half-reaction of D-amino acid
 oxidase: evidence against a concerted mechanism.
 SO Biochemistry, (1994 Apr 5) 33 (13) 4001-7.
 Journal code: 0370623. ISSN: 0006-2960.
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 AN 94190930 MEDLINE

L62 ANSWER 59 OF 94 MEDLINE on STN DUPLICATE 23
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 -amino acid oxidase.
 SO Metabolism: clinical and experimental, (1994 Sep) 43 (9) 1153-7.
 Journal code: 0375267. ISSN: 0026-0495.
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 AN 94366340 MEDLINE

L62 ANSWER 60 OF 94 MEDLINE on STN DUPLICATE 24
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 differentiation of astrocytes.
 SO Brain research, (1994 Aug 1) 652 (2) 297-303.
 Journal code: 0045503. ISSN: 0006-8993.
 AU Horiike K; Tojo H; Arai R; Nozaki M; Maeda T
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L62 ANSWER 61 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
 on STN DUPLICATE 25
 TI DISTRIBUTION OF FREE D-SERINE IN VERTEBRATE BRAINS
 SO BRAIN RESEARCH, (21 JAN 1994) Vol. 634, No. 2, pp. 291-295.
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L62 ANSWER 62 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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L62 ANSWER 64 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on
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L62 ANSWER 65 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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L62 ANSWER 94 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN
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L62 ANSWER 7 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
STN DUPLICATE 4

AB In mammalian brains, **D-amino-acid oxidase** activity is absent or scarce in the forebrain, is confined to the brain stem and cerebellum. and its localization is extended to the spinal cord. The oxidase-containing cells are astrocytes including Bergmann glial cells. Neither neurons, endothelial cells, oligodendrocytes nor ependymal cells show the oxidase activity. Free **D-serine**, a potent activator of the N-methyl-D-aspartate (NMDA) receptor, is in high levels in the forebrain (ca. 0.4 μ mol/g wet weight), and in low levels in the hindbrain. Thus, the localization of the oxidase activity is inversely correlated with the distribution of **D-serine** in mammalian brains. This inverse correlation is generally found in vertebrate brains. These results indicate that **D-amino-acid oxidase** decomposes

D-amino acids including D-serine in vertebrate brains, and that the magnitude of its activity is important in determining the regional concentrations of D-amino acids in the steady states. (C) 2001 Elsevier Science B.V. All rights reserved.

L62 ANSWER 10 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

AB Flavoprotein oxidases catalyze the removal of a hydride equivalent from their substrates, transferring the electrons to the flavin cofactor and ultimately to mol. oxygen. The mechanisms of flavoprotein oxidases which oxidize α -hydroxy and α -amino acids have been extensively studied due to their ubiquity in metabolism and the high pKa values of the protons which must be removed. **D-Amino acid oxidase** has long served as the paradigm for these enzymes. A seminal contribution to understanding the mechanism of this enzyme was the characterization of its ability to catalyze the elimination of HCl from β -chlorinated amino acids to form the resp. keto acids. This reaction implied the catalytic intermediacy of a carbanion formed by removal of the α -hydrogen as a proton (Scheme 1). Subsequent studies of α -hydroxy acid oxidizing flavoenzymes have been consistent with a similar mechanism for those enzymes. In the case of the latter group of enzymes, extensive structural analyses have provided further support for a carbanion intermediate. An alternative mechanism for carbon-hydrogen bond cleavage by **D-amino acid oxidase** involves direct hydride transfer from the substrate to the flavin (Scheme 2); this would be similar to the reactions of the pyridine nucleotide dependent alanine and glutamate dehydrogenase. Indeed, the recently described three-dimensional structure of pig kidney **D-amino acid oxidase** is consistent with a hydride transfer mechanism. In contrast to the structures of the α -hydroxy acid oxidizing enzymes glycolate oxidase and flavocytochrome b2, the active site of **D-amino acid oxidase** appears to lack a residue capable of acting as the base which would abstract the α -proton to form the proposed carbanion. Thus, mechanistic conclusions drawn from the structure and those drawn from solution studies are contradictory. A critical difference between the mechanisms of Schemes 1 and 2 is that carbon-hydrogen bond cleavage and formation of the imine double bond are stepwise in the former and concerted in the latter. We have utilized secondary nitrogen kinetic isotope effects to distinguish the relative timing of these two events as a probe of the structure of the transition state for carbon-hydrogen bond cleavage by **D-amino acid oxidase**.

L62 ANSWER 12 OF 94 MEDLINE on STN

DUPLICATE 7

AB The most recent research on **D-amino acid oxidases** and D-amino acid metabolism has revealed new, intriguing properties of the flavoenzyme and enlightened novel biotechnological uses of this catalyst. Concerning the in vivo function of the enzyme, new findings on the physiological role of **D-amino acid oxidase** point to a detoxifying function of the enzyme in metabolizing exogenous D-amino acids in animals. A novel role in modulating the level of **D-serine** in brain has also been proposed for the enzyme. At the molecular level, site-directed mutagenesis studies on the pig kidney **D-amino acid oxidase** and, more recently, on the enzyme from the yeast *Rhodotorula gracilis* indicated that the few conserved residues of the active site do not play a role in acid-base catalysis but rather are involved in substrate interactions. The three-dimensional structure of the enzyme was recently determined from two different sources: at 2.5-3.0 Å resolution for **DAAO** from pig kidney and at 1.2-1.8 Å resolution for *R. gracilis*. The active site can be clearly depicted: the striking absence of essential residues acting in acid-base catalysis and the mode of substrate orientation into the active site, taken together with the results of free-energy correlation studies, clearly support a hydride transfer type of mechanism in which the orbital steering between

the substrate and the isoalloxazine atoms plays a crucial role during catalysis.

L62 ANSWER 16 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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AB When D-propargylglycine was injected intraperitoneally into mice, polyuria, glycosuria, and aminoaciduria were observed as has been previously reported in rats. The urine of the mice treated with D-propargylglycine contained twice as much protein as that of the control mice. Polyacrylamide gel electrophoresis showed a new protein of approximately 62 kDa in the urine of the D-propargylglycine-treated mice. Protein sequencing revealed that this protein was serum albumin. Since the above-mentioned symptoms suggested dysfunction of the renal proximal tubules, the activity of urinary N-acetyl-beta -D-glucosaminidase, a marker enzyme of injury to the proximal tubules, was measured. The urinary enzyme activity was 2.6 times higher in the D-propargylglycine-treated mice than in the control mice. Light- and electron-microscopy showed degenerative and necrotic cells in the straight part of the proximal tubules of the treated mice. However, none of these symptoms was observed in D-propargylglycine-treated mutant mice, lacking D-amino-acid oxidase. These results indicate that D-propargylglycine itself is not nephrotoxic but its metabolite produced by the D-aminoacid oxidase reaction is nephrotoxic and injures proximal tubular cells, resulting in an impairment of the reabsorption of water, glucose, amino acids, and proteins.

L62 ANSWER 17 OF 94 HCAPLUS COPYRIGHT 2005 ACS on STN

AB A review with 30 refs. The stereochem. of a variety of pyridoxal phosphate-mediated enzymic reactions has been studied using enzyme inhibitors that are stereospecifically labeled in the β -position with deuterium. A versatile synthesis has been developed to prepare a wide variety of stereospecifically labeled D- and L-amino acids and inhibitors. Investigation of the "turnover" of β -chloro-D-alanine and D- and L-serine-O-sulfate by D-amino acid aminotransferase and L-aspartate aminotransferase resp. has shown that reaction within the active site of the former enzyme occurs with retention of stereochem. Although L-aspartate aminotransferase is an enzyme of the α -family, when it was incubated with 3-chloro-L-alanine in the presence of 2-mercaptoethanol, β -substitution occurred. This was shown to involve retention of stereochem., an outcome typical of reactions catalyzed by enzymes of the β -family that have little or no homol. with enzymes of the α -family. Formation of the "Schnackerz intermediate" has been studied as has the D-amino acid oxidase catalyzed reaction of the naturally occurring inhibitor D-propargylglycine.

L62 ANSWER 18 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
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AB We investigated the mechanism of recognition and activation of substrate by D-amino acid oxidase (DAO) by thermodynamical and spectrophotometric methods using zwitterionic ligands [N-methylisonicotinate (NMIH), trigonelline, and homarine] and monoanionic ligands as model compounds of the substrate and the product. In terms of the charge within the substrate D-amino acid, monoanionic (e.g., benzoate), zwitterionic (e.g., NMIH), and dianionic (e.g., terephthalate) ligands are thought to be good models for neutral, basic, and acidic amino acids, respectively, because when a substrate binds to DAO, as previously reported, the alpha-ammonium group ($-\text{NH}_3^+$) probably loses a proton to become neutral ($-\text{NH}_2$) before the oxidation. Zwitterionic ligands can also be good model compounds of product in the purple complex (the complex of reduced DAO with the product imino acid), because the imino nitrogen of the imino acid is in a protonated cationic form. We also discuss electrostatic interaction, steric effect, and charge-transfer interaction as factors which affect the

affinity of substrate/ligand for DAO. Monoanionic ligands have high affinity for neutral forms of oxidized and semiquinoid DAO, while zwitterionic ligands have high affinity for anionic forms of oxidized, semiquinoid, and reduced DAO; this difference was explained by the electrostatic interaction in the active site. The low affinity of homarine (N-methylpicolinate) for oxidized DAO, as in the case of o-methylbenzoate, is due to steric hindrance: one of the ortho carbons of benzoate is near the phenol carbons of Tyr228 and the other ortho carbon is near the carbonyl oxygen of Gly313. The correlation of the affinity of meta- and para-substituted benzoates for oxidized DAO with their Hammett's sigma values are explained by the HOMO-LUMO interaction between the phenol group of Tyr224 and the benzene ring of benzoate derivative. The pK(a) of neutral flavin [N(3)-H of oxidized flavin, N(5)-H of semiquinoid flavin, and N(1)-H of reduced flavin] decreases by its binding to the apoenzyme. The magnitude of the decrement is oxidized flavin < semiquinoid flavin < reduced flavin. The largest factor in the substantially low pK(a) of reduced flavin in DAO is probably the steric hindrance between the hydrogen atom of H-N(1) (flavin) and the hydrogen atom of H-U of Gly315, which becomes significant when a hydrogen is bound to N(1) of flavin.

L62 ANSWER 19 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 9

AB High levels of D-aspartate occur in the brain and endocrine glands, such as pineal, adrenal and pituitary. In the brain, D-aspartate levels are highest in embryonic and early postnatal stages. Notably high levels occur in the early postnatal cortical plate and subventricular zone of the cerebral cortical cultures, implying a role in development. In embryonic neuronal primary culture cells, we detected high levels of endogenous D-aspartate and demonstrated biosynthesis of [C-14]D-aspartate using [C-14]L-aspartate as precursor. Synthesis of D-aspartate in cell cultures is inhibited by amino-oxyacetic acid, an inhibitor of pyridoxal phosphate-dependent enzymes. In the rat adrenal medulla, D-aspartate is depleted by treatment of the animals with intraperitoneal nicotinic injections. In adrenal slices, D-aspartate is released by depolarization with KCl or acetylcholine, implying physiological release by activation of the cholinergic innervation of the adrenal.

Our characterization of D-aspartate origin, biosynthesis and depolarization-induced release implies specific physiological roles for this amino acid. (C) 2000 IBRO. Published by Elsevier Science Ltd. All rights reserved.

L62 ANSWER 20 OF 94 HCAPLUS COPYRIGHT 2005 JES on STN

AB A simultaneous determination method for D-Asp, D-Ser, and D-Ala in biol. samples

was established using a reversed-phase HPLC system after pre-column derivatization with OPA and Boc-L-Cys. The calibration curve of each D-amino acid spiked in a mouse cerebellum sample was linear from 500 fmol to 500 pmol. Within-day and day-to-day precision were less than 2.5% and 6.1% (RSD) resp. With this method, free D-Asp, D-Ser, and D-Ala contents in various brain regions and serum of mutant mice lacking D-amino acid oxidase activity (ddY/DAAO-) were determined and compared with those obtained for control ddY/DAAO+ mice.

L62 ANSWER 22 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN

AB D-serine occurs in the brain at levels about a third of those of L-serine. D-serine's localization in the brain resembles that of the N-methyl-D-aspartate (NMDA) subtype of glutamate receptors, and D-serine has greater potency to activate the NMDA receptor's "glycine" site than glycine. D-amino acid oxidase selectively degrades D-serine in brain slices and cultures where it markedly

attenuates neurotransmission by NMDA receptor, establishing **D-serine** as an endogenous ligand for the NMDA receptor (Mothet et al, PNAS 97:4926,2000). Serine racemase, which converts L-serine to **D-serine**, was recently cloned and is localized to glia cells where **D-serine** is found (Wolesker et al PNAS 96:13409,1999). To study the physiological significance of **D-serine**, we are developing serine racemase knockout and transgenic mice.

L62 ANSWER 23 OF 94 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

AB A method for **D-amino-acid-oxidase** (EC-1.4.3.3, mol. weight 162,000) manufacture is new and involves culturing *Fusarium oxysporum* (S-1F4, FERM BP-5010) at specific pH and temperature. The **D-amino-acid-oxidase** can be used for diagnosing kidney insufficiency, Alzheimer disease and cataract and also for measuring D-amino acids such as D-alanine, D-histidine, D-methionine, D-valine, D-lysine and **D-serine**. In an example, *F. oxysporum* was inoculated in a culture medium containing 10% glucose, 0.5% peptone, 0.3% yeast extract and 0.3% malt extract for 2 days at 30 deg. Secondary culture was carried out in medium containing 2.0% glucose, 1.0% lysine, 0.1% K₂HPO₄, 0.1% NaH₂PO₄, 0.05% MgSO₄·7H₂O, 0.01% CaCl₂·2H₂O and 0.01% yeast extract and cultured for 2 days. The microbial cells were isolated and suspended in 0.1 M Tris-HCl buffer and homogenized. **D-amino-acid-oxidase** activity was measured in the supernatant liquid. The total activity was found to be 17.11 U.

L62 ANSWER 24 OF 94 HCAPLUS COPYRIGHT 2005 JCS on STN

AB In this study, in search of nervous system specific expression of **D-amino acid oxidase (DAO)**, reverse transcriptase-coupled PCR (polymerase chain reaction) analyses were carried out to confirm the gene expression of DAO in brain and then we have cloned the rat cerebellar cDNA and predicted the primary structure of DAO expressed in the nervous tissue. The mRNA for DAO was found in cerebellum. Anal. of the nucleotide (nt) sequence revealed that full length cDNA has a 1547 nt sequence with a 5'-untranslated region of 199 nt, an open reading frame of 1041 nt that encodes 346 amino acids, and 3'-untranslated region of 307 nt that contains the polyadenylation signal sequence. The deduced amino acid sequence consisting of 346 amino acids showed 93.1, 80.7, 77.8 and 79.0 % identity with the mouse, human, porcine and rabbit kidney enzymes, resp. Three catalytically important residues, Thr-224, Tyr-228 and Arg-283, of the porcine enzyme were all conserved in these 4 species. The targeting signal for the peroxisome localization of the brain enzyme was also present at the C-terminal sequence, Ser-His-Leu. The assignment of the initiation site of translation was based on the fact that ATG at 1-3 of the open reading frame was preceded by sequences that fulfill the Kozak criteria for initiation codon. A difference was observed in the number of

amino

acid residues among the enzymes of animal species. Porcine, human and rabbit enzymes are encoded by 347 amino acid residues, whereas mouse is 345. The N-terminal sequence comprising the first 30 amino acids of the rat cerebellar DAO was, like in the cases of other DAOs, highly hydrophobic, and contains a sequence characteristic of a FAD binding site, Gly-X-Gly-X-X-Gly. The C-terminal tripeptide peroxisomal targeting signal sequence, Ser-His-Leu, is also conserved in cerebellar DAO, indicating the presence of DAO in peroxisomes in nervous tissues. Based on these data, the primary structure of the brain enzyme is identical with that of the kidney enzyme, encoded by the same single gene in the genome. We postulate that DAO expressed in the brain astrocytes may be the key enzyme metabolizing **D-serine**, an allosteric modulator of NMDA receptor, as summarized schematically.

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AB D-amino acid oxidase (D-AAO) is a peroxisomal flavoenzyme, the physiological substrate and the precise function of which are still unclear. We have investigated D-AAO distribution in rat brain, by immunocytochemistry, with an affinity-purified polyclonal antibody. Immunoreactivity occurred in both neuronal and glial cells, albeit at different densities. Glial immunostaining was strongest in the caudal brainstem and cerebellar cortex, particularly in astrocytes, Golgi-Bergmann glia, and tanycytes. Hindbrain neurons were generally more immunoreactive than those in the forebrain. Immunopositive forebrain cell populations included mitral cells in the olfactory bulb, cortical and hippocampal neurons, ventral pallidum, and septal, reticular thalamic, and paraventricular hypothalamic nuclei. Within the positive regions, not all the neuronal populations were equally immunoreactive; for example, in the thalamus, only the reticular and anterodorsal nuclei showed intense labelling. In the hindbrain, immunopositivity was virtually ubiquitous and was especially strong in the reticular formation, pontine, ventral and dorsal cochlear, vestibular, cranial motor nuclei, deep cerebellar nuclei, and the cerebellar cortex, especially in Golgi and Purkinje cells.

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AB Nucleotide sequence of cDNA encoding rat D-amino-acid oxidase (DAO) was determined. Two species of DAO mRNA were present in rat kidney, liver, and brain. They were probably produced by alternative splicing. Rat DAO cDNA encodes 346 amino acid residues, indicating that rat DAO is an intermediate form between mouse DAO (345 amino acids) and DAOs (347 amino acids) of human, rabbit, and pig. Deduced amino acid sequence indicates 93% identity between rat and mouse DAO. Northern hybridization and western blotting supported the sequence data. (C) 1998 Elsevier Science B.V.

L62 ANSWER 39 OF 94 MEDLINE on STN

AB Though L-amino acids predominate in living organisms, substantial levels of free D-serine and D-aspartate occur in mammals, especially in nervous and endocrine tissue. Using an antibody specific for glutaraldehyde-fixed D-aspartate, we have localized D-aspartate in rat tissues. In the brain we observe discrete neuronal localizations of D-aspartate, especially in the external plexiform layer of the olfactory bulb, hypothalamic supraoptic and paraventricular nuclei, the medial habenula, and certain brainstem nuclei. In rats 3-4 weeks old, we observe D-aspartate in septal nuclei and in a subset of stellate and basket cells of the cerebellum. D-aspartate is also concentrated in glands, including the epinephrine cells of the adrenal medulla, the posterior pituitary, and the pineal gland. Levels in the pineal gland are the highest of any mammalian tissue. D-aspartate oxidase, visualized by enzyme histochemistry, is concentrated in neurons of the hippocampus, cerebral cortex, and olfactory epithelium, as well as choroid plexus and ependyma. Localizations of D-aspartate are reciprocal to D-aspartate oxidase, suggesting that the enzyme depletes endogenous stores of the amino acid and might inactivate synaptically released D-aspartate.

DUPLICATE 15

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- AB** **D-Aspartate oxidase (DDO) cDNAs**
 were isolated from the human brain RNA using the RT-PCR method. Two forms (DDO-1 and DDO-2) of DDO mRNA were detected. Structural analysis of the DDO cDNAs and genomic DNA showed that DDO-1 and DDO-2 are produced by alternative splicing from a single gene. A protein encoded by the DDO-1 cDNA consists of 341 amino acids, and the amino acid sequence of DDO-2 was identical to that of DDO-1 except for the absence of 59 amino acids covering residues 95-153 of DDO-1. A homogenous preparation of DDO-1 was obtained using an expression system in *Escherichia coli*. DDO-1 selectively catalyzed the oxidative deamination of D-aspartate and its N-methylated derivative, N-methyl D-aspartate; the values of K_m and k_{cat} for D-aspartate were 2.7 mM and 52.5 mol D-aspartate oxidized.s(-1).mol(-1) and those for N-methyl D-aspartate were 6.8 mM and 37.7 mol N-methyl D-aspartate oxidized.s(-1).mol(-1), respectively.
- L62** ANSWER 43 OF 94 MEDLINE on STN DUPLICATE 16
- AB** The activity and regional distribution of **D-amino acid oxidase (DAO)**, an enzyme that inactivates **D-serine**, were examined in the medulla and spinal cord of the rat by biochemical and histochemical procedures. **DAO** activity was noticeably low or absent in the nucleus of the solitary tract, ventrolateral medulla and intramedullary lateral cell column of the spinal cord. This may be indicative of a neuromodulatory role for endogenous **D-serine** (at the NMDA-glycine site) in the central control of blood pressure.
- L62** ANSWER 46 OF 94 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
- L62** ANSWER 53 OF 94 MEDLINE on STN DUPLICATE 19
- AB** Using an antibody highly specific for **D-serine** conjugated to glutaraldehyde, we have localized endogenous **D-serine** in rat brain. Highest levels of **D-serine** immunoreactivity occur in the gray matter of the cerebral cortex, hippocampus, anterior olfactory nucleus, olfactory tubercle, and amygdala. Localizations of **D-serine** immunoreactivity correlate closely with those of **D-serine** binding to the glycine modulatory site of the N-methyl-D-aspartate (NMDA) receptor as visualized by autoradiography and are inversely correlated to the presence of **D-amino acid oxidase**. **D-Serine** is enriched in process-bearing glial cells in neuropil with the morphology of protoplasmic astrocytes. In glial cultures of rat cerebral cortex, **D-serine** is enriched in type 2 astrocytes. The release of **D-serine** from these cultures is stimulated by agonists of non-NMDA glutamate receptors, suggesting a mechanism by which astrocyte-derived **D-serine** could modulate neurotransmission. **D-Serine** appears to be the endogenous ligand for the glycine site of NMDA receptors.
- L62** ANSWER 54 OF 94 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
- AB** We have investigated the anatomical distribution and postnatal development of **D-aspartate** and **D-serine** in the rat brain and periphery using HPLC techniques. **D-Serine** was confined predominantly to the brain throughout postnatal life. At birth, a substantial quantity of **D-serine** is observed throughout the brain areas. The cerebral **D-serine** content increased from birth to postnatal week (PW) 3 and remained constant thereafter, whereas the cerebellar **D-serine** content peaked at PW1. In contrast, the transient emergence of **D-aspartate** was found in almost all brain and peripheral organs. A substantial

quantity of D-aspartate was also seen in all brain areas at birth, whereas the D-aspartate content in the cerebrum and cerebellum decreased dramatically by PW1 and 7 respectively. Further, the D-aspartate content and the ratio of D-aspartate to total aspartate were highest in the adrenal at PW3 (608 +/- 70 nmol/g, 45.9%) and in the testis at PW14 (221 +/- 7 nmol/g, 57.8%) respectively. Because D-serine potentiates N-methyl-D-aspartate receptor-mediated transmission through the strychnine-insensitive glycine site and because D-serine exhibits an N-methyl-D-aspartate receptor-related distribution and development, D-serine may be a tenable candidate for an intrinsic ligand for the glycine site. In contrast, because the periods of maximal emergence of D-aspartate in the brain and periphery occur during critical periods of morphological and functional maturation of organs, D-aspartate could participate in the regulation of these developmental processes of organs.

L62 ANSWER 59 OF 94 MEDLINE on STN DUPLICATE 23

AB D-Alanine was administered orally to mutant mice lacking D-amino acid oxidase (EC 1.4.3.3). The mice had free access to drinking water containing 0.5% D- or L-alanine or 0.1% D-alanine for 2 weeks. The mice were then killed, and levels of the D- and L-enantiomers of free alanine, serine, proline, glutamate, and aspartate were determined in serum, liver, kidney, cerebrum, and cerebellum tissues. D-Alanine content increased by 60-fold (liver) to 110-fold (serum, brain), although the L-alanine level did not change. The increase of serum and brain D-alanine concentrations in animals fed 0.5% D-alanine was approximately five times more than that in animals fed 0.1% D-alanine, ie, the increase was roughly D-alanine dose-dependent in these tissues. The increase due to 0.5% D-alanine administration was reduced by 50% 17 hours after administration of D-alanine was stopped. Administration-induced increases in D-alanine levels in the cerebrum and cerebellum were not less than those in the serum, suggesting that D-alanine passed the blood-brain barrier quite freely. In the liver but not in other tissues, there were slight increases in D-serine and D-proline levels after administration of D-alanine. Administration of D-alanine produced no alterations in free glutamate and aspartate levels. No D-enantiomers of alanine, serine, proline, glutamate, or aspartate were detected in the liver and kidney tissue proteins of any animals, even in the mutant mice that received 0.5% D-alanine.

L62 ANSWER 60 OF 94 MEDLINE on STN DUPLICATE 24

AB Based on enzymatic activity, the localization and the identification of D-amino-acid oxidase-containing cells in rat whole brain was systematically studied in serial fixed sections. The oxidase activity was absent or scarce in the forebrain, was confined to the brain stem (midbrain, pons and medulla oblongata) and cerebellum, and its localization was extended to the spinal cord. In the brain stem the oxidase was mainly localized in the tegmentum, particularly in the reticular formation. The intense oxidase reactions were present in the red nucleus, oculomotor nucleus, trochlear nucleus, ventral nucleus of the lateral lemniscus, dorsal and ventral cochlear nuclei, vestibular nuclei, nuclei of posterior funiculus, nucleus of the spinal tract of the trigeminal nerve, lateral reticular nucleus, inferior olivary nucleus, and hypoglossal nucleus. In the cerebellum the activity in the cortex was much more intense than that in the medulla. In all the fields described above, the oxidase-containing cells were exclusively astrocytes including Bergmann glial cells, and neither neuronal components, endothelial cells, oligodendrocytes nor ependymal cells showed oxidase activity. These results indicated that the astrocytes regionally differentiated into two distinct types, one of which expressed oxidase in the midbrain, rhombencephalon and spinal cord, and the other which did not in the forebrain. The localization of the oxidase was inversely correlated with the distribution of free D-serine in mammalian brains.

(Nagata, Y., Horiike, K. and Maeda, T., Brain Res., 634 (1994). 291-295). Based on the characteristic localization of the oxidase-containing astrocytes, we discussed the physiological role of the oxidase.

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on STN DUPLICATE 25

AB Free D-serine distribution in vertebrate brains was investigated. In various brain regions of the lower vertebrate species, carp, frog and chick, free D-serine levels were low. On the contrary, in the mammals, mouse, rat and bull, the contents of free D-serine were high in the forebrain (around 400 nmol/g weight, and the ratio of D-serine to L-serine, was D/L = 0.4), and low in the hindbrain. In developing mice, D-serine levels in the cerebrum increased with age and attained the adult level (D/L = 0.40) 8 weeks after birth. In the cerebellum and brain stem, the free D-serine levels increased with age until 2 weeks, followed by a decrease to the adult levels: the D/L ratios remained constant until 2 weeks of age, then decreased to 0.03 in the cerebellum and 0.12 in the brain stem. Free D-serine was shown not to be of microbial origin using germ-free mice. In the rat forebrain, D-serine was evenly distributed in two cerebral regions, namely frontal and occipital lobes. The D/L ratios in other regions of forebrain, hippocampus and hypothalamus, were comparable to the cerebrum (D/L = 0.4), while that in the olfactory bulb was lower (D/L = 0.12). In the rat cerebrum, the D-serine content in the grey matter was significantly higher than that in the white matter. The contents of free D-serine in bovine cerebrum and cerebellum were similar to those in other mammalian brains, but the D/L ratio for bovine cerebral grey matter was lower than that for the cerebral white matter. The D-serine level was discussed in terms of D-amino-acid oxidase activity.

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AB D-Amino acids administered to animals are absorbed by the intestine and transported through the blood-stream to solid tissues where they are oxidized in vivo by D-amino acid oxidase and D-aspartate oxidase to produce the same compounds they do in vitro; i.e. NH₃, H₂O₂, and the keto acid corresponding to the amino acid ingested. In the liver and kidneys of the animals, an inverse relationship exists between the occurrence of D-amino acids and these oxidative enzymes. For example, younger animals have lower amounts of these oxidases and consequently higher concentrations of free D-amino acids compared to adult animals. If the ingested D-amino acids are not metabolized by these enzymes, they will accumulate in the tissues and may provoke serious damage, e.g. suppression of the synthesis of other essential enzymes and inhibition of the growth rate of the animals. A specific enzyme induction for these D-amino acid oxidases exists in young rats following ingestion of free D-amino acids by the mother. Specifically, when a mother rat ingests D-Ala or D-Asp during pregnancy and suckling, an increase in D-amino acid oxidase or D-aspartate oxidase is observed in the liver and kidneys of the baby rats. These results suggest that the in vivo biological role of these oxidases in animals is to act as detoxifying agents to metabolize D-amino acids which may have accumulated during aging.

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AB 1. D-Amino acid oxidase (D-AAO) oxidizes: D-Met, D-Pro, D-Phe, D-Tyr, D-Ile, D-Leu, D-Ala and D-Val. D-Ser, D-Arg, D-His, D-norleucine and D-Trp are oxidized at a low rate.

D-Ornithine, cis-4-hydroxy-D-proline, D-Thr, D-Thp-methyl ester, N-acetyl-D-Ala and D-Lys are oxidized at a very low rate. 2. D-Asp, D-Glu and their derivatives, Gly and all the L-amino acids are not oxidized (or are at a rate which is undetectable). 3. Among all D-amino acids, D-Met is the most highly oxidized compound. The K-m value is 1.7 mM. 4.

D-Aspartate oxidase (D-Aspo) either purified from Octopus vulgaris or from beef kidney oxidizes only D-Asp, D-Glu and their following derivatives: D-Asn, D-Gln, D-Asp-dimethyl-ester and N-methyl-D-Asp. 5. However, D-Pro, D-Leu, D-Ala and D-Met, are also oxidized by this enzyme, but at a very low rate (between 0.2 and 0.6% of D-Asp). 6. All other D-amino acids, glycine and all the L-amino acids are not oxidized. 7. Under experimental conditions, 1 U of D-AAO is able to totally oxidize 0.1 mu-mol of the following amino acids: D-Met, D-Pro, D-Phe, D-Thy, D-Ile, D-Leu, D-Ala, D-Val, D-Ser and D-Arg. 8. Similarly, 1 U of D-Aspo in 1 hr of incubation totally oxidizes 0.1 mu-mol of D-Asp, D-Glu, D-Asn and D-Gln.

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AB Free D-serine distribution in vertebrate brains was investigated. In various brain regions of the lower vertebrate species, carp, frog and chick, free D-serine levels were low. On the contrary, in the mammals, mouse, rat and bull, the contents of free D-serine were high in the forebrain (around 400 nmol/g wet weight, and the ratio of D-serine to L-serine, was D/L = 0.4), and low in the hindbrain. In developing mice, D-serine levels in the cerebrum increased with age and attained the adult level (D/L = 0.40) 8 wk after birth. In the cerebellum and brain stem, the free D-serine levels increased with age until 2 wk, followed by a decrease to the adult levels: the D/L ratios remained constant until 2 wk of age, then decreased to 0.03 in the cerebellum and 0.12 in the brain stem. Free D-serine was shown not to be of microbial origin using germ-free mice. In the rat forebrain, D-serine was evenly distributed in two cerebral regions, namely frontal and occipital lobes. The D/L ratios in other regions of forebrain, hippocampus and hypothalamus, were comparable to the cerebrum (D/L = 0.4), while that in the olfactory bulb was lower (D/L = 0.12). In the rat cerebrum, the D-serine content in the gray matter was significantly higher than that in the white matter. The contents of free D-serine in bovine cerebrum and cerebellum were similar to those in other mammalian brains, but the D/L ratio for bovine cerebral gray matter was lower than that for the cerebral white matter. The D-serine level was discussed in terms of D-amino-acid oxidase activity.

L62 ANSWER 72 OF 94 MEDLINE on STN

DUPLICATE 29

AB The physiological role of D-amino acid oxidase (EC 1. 4. 3. 3) in mouse brain is described. The presence of D-enantiomers of neutral common amino acids was surveyed in the brain. D-serine was shown to be present at high concentration only in regions where the enzyme activity was low. In normal mice whose D-amino acid oxidase activity was much higher in the cerebellum than in the cerebrum, free D-serine content was apparently lower in the cerebellum than in the cerebrum. In mice of a mutant strain lacking D-amino acid-oxidase activity, the free D-serine level was remarkably high both in the cerebrum and cerebellum. The results suggest that the enzyme is involved in the elimination of free D-serine in the cerebellum.

L62 ANSWER 74 OF 94 MEDLINE on STN

DUPLICATE 30

AB The presence of free D-alanine, D-proline and D-serine was demonstrated in mammalian tissues, using a mutant mouse strain lacking D-amino acid oxidase. In the

experiment, free amino acids from the kidney and serum were derivatized with 1-fluoro-2,4-dinitrophenyl-5-L-alanine amide (FDAA) to diastereomers, separated by two-dimensional thin-layer chromatography (TLC), and analysed by reversed-phase high-performance liquid chromatography (HPLC) for the resolution of D- and L-isomers. D/L ratios of alanine, proline and serine were obtained based on the peak areas of HPLC.

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L92 11 L80 NOT 2002-2005/PY

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L93 16 L81 NOT 2002-2005/PY

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L97 0 L85 NOT 2002-2005/PY

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=> d tot

L99 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
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Cowie, Alison; Gouzy, Jerome; Golding, Brian; Puhler, Alfred
AN 2001:634533 HCAPLUS
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Masuy, David; Pohl, Thomas; Portetelle, Daniel; Puhler, Alfred; Purnelle,

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L99 ANSWER 3 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
STN DUPLICATE 1

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STN DUPLICATE 2

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STN DUPLICATE 3

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L99 ANSWER 7 OF 22 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on
STN DUPLICATE 4

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L99 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
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 SO Journal of Biochemistry (Tokyo, Japan) (1989), 105(6), 1024-9
 CODEN: JOBIAO; ISSN: 0021-924X
 AU Watanabe, Fusao; Fukui, Kiyoshi; Momoi, Kyoko; Miyake, Yoshihiro
 AN 1989:435738 HCAPLUS
 DN 111:35738

L99 ANSWER 10 OF 22 MEDLINE on STN DUPLICATE 6
 TI Inhibition of peroxisomal fatty acyl-CoA oxidase by antimycin A.
 SO Biochemical journal, (1987 Dec 1) 248 (2) 603-7.
 Journal code: 2984726R. ISSN: 0264-6021.
 AU Vamecq J; Schepers L; Parmentier G; Mannaerts G P
 AN 88133915 MEDLINE

L99 ANSWER 11 OF 22 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
 TI Inhibition of **glutamate**-aspartate transaminase by β -methylene-DL-aspartate.
 SO Biochemical Pharmacology, (1983) 32/4 (679-689).
 CODEN: BCPA6
 AU Cooper A.J.L.; Fitzpatrick S.M.; Ginos J.Z.; et al.
 AN 83101134 EMBASE

L99 ANSWER 12 OF 22 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
 TI N HYDROXY AMINO-ACIDS IRREVERSIBLE **INHIBITORS** OF PYRIDOXAL 5 PHOSPHATE ENZYMES AND SUBSTRATES OF **D AMINO-ACID OXIDASE** AND L AMINO-ACID OXIDASE.
 SO Journal of Biological Chemistry, (1979) Vol. 254, No. 8, pp. 2748-2753.
 CODEN: JBCHA3. ISSN: 0021-9258.
 AU COOPER A J L [Reprint author]; GRIFFITH O W
 AN 1979:244680 BIOSIS

L99 ANSWER 13 OF 22 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN DUPLICATE 7
 TI D AND L STEREO ISOMERS OF ALLYL GLYCINE CONVULSIVE ACTION AND INHIBITION OF BRAIN L **GLUTAMATE** DECARBOXYLASE.
 SO Journal of Neurochemistry, (1977) Vol. 28, No. 2, pp. 349-354.
 CODEN: JONRA9. ISSN: 0022-3042.
 AU ORLOWSKI M; REINGOLD D F; STANLEY M E
 AN 1977:242226 BIOSIS

L99 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Some kinetic properties of D-aspartate oxidase from the digestive gland of the octopus (*Octopus vulgaris* Lam.)
 SO International Journal of Biochemistry (1977), 8(1), 73-7
 CODEN: IJBOBV; ISSN: 0020-711X
 AU Palescandolo, Rosaria; Scardi, V.; Tosi, Luisa
 AN 1977:401730 HCAPLUS
 DN 87:1730

L99 ANSWER 15 OF 22 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
 TI D Aspartate oxidase activity in extracts of mammalian central nervous tissue.
 SO Journal of Neurochemistry, (1975) 25/3 (299-304).
 CODEN: JONRA
 AU Davies L.P.; Johnston G.A.R.
 AN 76123073 EMBASE

L99 ANSWER 16 OF 22 MEDLINE on STN DUPLICATE 8
 TI D-aspartate oxidase in the thyroid gland.
 SO Enzyme, (1975) 20 (2) 80-9.
 Journal code: 1262265. ISSN: 0013-9432.
 AU Jaroszewicz L
 AN 75149499 MEDLINE

L99 ANSWER 17 OF 22 MEDLINE on STN DUPLICATE 9
 TI Coupled optical rate determinations of amino acid oxidase activity.
 SO Biochimica et biophysica acta, (1975 Jan 23) 377 (1) 61-70.
 Journal code: 0217513. ISSN: 0006-3002.
 AU Holme D J; Goldberg D M
 AN 75128029 MEDLINE

L99 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Amino acid metabolism in the tissues of the crayfish *Orconectes limosus*.
 Transamination, oxidative and nonoxidative deamination
 SO Zeitschrift fuer Vergleichende Physiologie (1967), 56(1), 95-110
 CODEN: ZVPHAA; ISSN: 0044-362X
 AU Urich, Klaus
 AN 1968:10696 HCAPLUS
 DN 68:10696

L99 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI D-Aspartate oxidase of kidney
 SO Biochimica et Biophysica Acta (1967), 146(1), 54-76
 CODEN: BBACAQ; ISSN: 0006-3002
 AU Dixon, Malcolm; Kenworthy, Philip
 AN 1967:497097 HCAPLUS
 DN 67:97097

L99 ANSWER 20 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Biochemical study of N-(1-phenyl-2-propyl)-3,3-diphenylpropylamine
 SO Rendiconti e Atti della Accademia di Scienze Mediche e Chirurgiche (1965),
 119(2), 253-75
 CODEN: RSMCA7; ISSN: 0370-7369
 AU Della Pietra, Gennaro; Illiano, Gennaro; Maistro, Anna
 AN 1967:72732 HCAPLUS
 ,DN 66:72732

L99 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI L-Glutamic acid dehydrogenase: structural requirements for substrate
 competition: effect of thyroxine
 SO Journal of Biological Chemistry (1957), 224, 591-607
 CODEN: JBCHA3; ISSN: 0021-9258
 AU Caughey, Winslow S.; Smiley, J. Donald; Hellerman, Leslie
 AN 1957:43671 HCAPLUS
 DN 51:43671
 OREF 51:8173c-h

L99 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI Studies of fatty acid oxidation. I. Oxidation of the alkylthio fatty acids
 SO Biochemical Journal (1954), 58, 368-74
 CODEN: BIJOAK; ISSN: 0264-6021
 AU Brown, W. T.; Scholefield, P. G.
 AN 1955:16298 HCAPLUS
 DN 49:16298
 OREF 49:3273i,3274a-f

=> fil .becpat
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30446 PRY<=2001
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FILE 'HCAPLUS'

161233 WO/PC
493021 PRY<=2001

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345250 WO/PC
1519548 PRY<=2001
(PRY<=2001)

L102 3 (L23 OR L48) AND WO/PC AND PRY<=2001

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=> dup rem l103

PROCESSING COMPLETED FOR L103

L104 4 DUP REM L103 (5 DUPLICATES REMOVED)

=> d tot

L104 ANSWER 1 OF 4 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
TI Determining a genotype of an individual for preparing a composition for
treating schizophrenia by determining the identity of a
nucleotide at a biallelic marker of the **D-amino**
acid oxidase gene of the polynucleotide in a sample;

D-amino-acid-oxidase
genotyping for disease diagnosis

AU COHEN D; CHUMAKOV I
AN 2003-19696 BIOTECHDS
PI WO 2003050303 19 Jun 2003

L104 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

TI **D-Amino acid oxidase** inhibitors
for learning and memory

SO PCT Int. Appl., 36 pp.
CODEN: PIXXD2

IN Heefner, Donald L.; Currie, Mark G.; Rossi, Richard Filip, Jr.; Zepp,
Charles M.

AN 2003:376633 HCAPLUS
DN 138:362716

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 2003039540	A2	20030515	WO 2002-US36051	20021112 <--
	WO 2003039540	A3	20031204		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT,
 TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
 FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF,
 CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003162825 A1 20030828 US 2002-292368 20021112 <--

L104 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN
 TI RNA interference-mediated inhibition of G72 and **D-amino**
acid oxidase gene expression using short interfering
 nucleic acids
 SO PCT Int. Appl., 139 pp.
 CODEN: PIXXD2
 IN McSwiggen, James; Beigelman, Leonid; Haeberli, Peter
 AN 2003:678822 HCAPLUS
 DN 139:191411

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003070743	A1	20030828	WO 2003-US4397	20030213 <--
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 9851819	A1	19980611	AU 1998-51819	19980112 <--
AU 729657	B2	20010208		
AU 9939188	A1	19990916	AU 1999-39188	19990713 <--
AU 769175	B2	20040115	AU 2000-56616	20000911 <--
EP 1495041	A1	20050112	EP 2003-742736	20030213
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

L104 ANSWER 4 OF 4 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
 TI Novel **D-amino acid oxidase**
 polypeptide useful for identifying candidate molecule for the treatment
 of a central nervous system disorder and for the treatment of
schizophrenia, depression or bipolar
 disorder;
 recombinant protein production and sense, antisense and triple
 helix-forming sequence for use in disease gene therapy
 AU COHEN D; CHUMAKOV I
 AN 2003-07415 BIOTECHDS
 PI WO 2002066672 29 Aug 2002

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FULL ESTIMATED COST		
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